Table 4. Seedling vigor values calculated for 18 tomato rootstock and five scion cultivars in a greenhouse in Wooster, OH, using a formula including four plant and two environmental variables and one constant.

	Vigor[y]			
Cultivar[z]	Run 1 (27 Feb.–17 Mar. 2014)		Run 2 (28 Mar.–15 Apr. 2014)	
Aiboh	106	f–h[x]	401	c
Akaoni	72	gh	2,292	bc
Aooni	102	f–h	878	bc
Armada	198	e–h	3,554	bc
Arnold	1,727	a	4,008	bc
B.B.	230	e–h	2,218	bc
Beaufort	1,024	b	2,437	bc
Better Boy	154	e–h	1,593	bc
Brandywine	130	e–h	1,134	bc
Celebrity	141	e–h	1,316	bc
Cheong Gang	190	e–h	2,256	bc
Cherokee Purple	234	e–h	393	c
Estamino	65	h	606	c
Kaiser	513	cd	11,504	a
Maxifort	610	c	5,244	b
Resistar	315	d–f	956	bc
RST-04–105	99	f–h	1,557	bc
RST-04–106	191	e–h	1,844	bc
San Marzano 2	305	d–g	3,751	bc
Shield	73	gh	391	c
Stallone	357	de	4,189	bc
Supernatural	154	e–h	544	c
Trooper	3	h	145	c
P value	<0.0001		0.017	

[z]Five cultivars in bold are scions (Better Boy, Brandywine, Celebrity, Cherokee Purple, and San Marzano 2). The other 18 cultivars are rootstocks. 'Kaiser' and 'Stallone' seed was pelleted. 'Arnold', 'Beaufort', 'Kaiser', 'Maxifort', 'Shield', and 'Stallone' seed was primed.

[y]$\text{Vigor} = \frac{\text{Aboveground dry weight (mg)} \times \text{stem diameter (mm)} \times \text{leaf area} (\text{cm}^2) \times (1 \times 10^5)}{(T_{90} \times \text{GDD} \times \text{DLI})}$ where T_{90} represents days to reach 90% of final emergence; all biomass values are measures taken 18 d after sowing; growing degree days (GDD) and daily light integral (DLI) represent these variables accumulated by 18 d after sowing; and daily GDD is calculated using a base and ceiling temperature of 10 and 27 °C, respectively. In this experiment and calculation, GDD and DLI were 257 and 172 mol·m^{-2}, respectively, in Run 1, and 262 and 282 mol·m^{-2}, respectively, in Run 2; 1 mg = 3.5274 × 10^{-5} oz, 1 mm = 0.0394 inch, 1 cm^2 = 0.1550 inch^2, (1.8 × °C) + 32 = °F.

[x]Means within the same column in each run followed by the same letter are not significantly different ($P < 0.05$) as analyzed using the LINES and BYLEVEL options in the LSMEANS statement in the GLIMMIX procedure (SAS version 9.3; SAS Institute, Cary, NC).